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The Short Intonation Unit as a Vehicle of Important Topics

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1. Introduction

1.1. Overview

This paper studies one of the functions of intonation units (IUs) within discourse structure and proposes that the importance as well as the givenness of a noun motivates linguistic forms such as intonation units.¹ It specifically examines two kinds of intonation units in Japanese: phrasal intonation units and clausal intonation units. We find that one of the functions of phrasal IUs (especially with topic markers) is to introduce important information, i.e., topics, while clausal IUs tend to not introduce important information.² We also point out that phrasal intonation units in Japanese share functions and phonetic characteristics with preposed elements in left-dislocation sentences found in many languages such as English, French, Italian, and Spanish. This paper claims that the importance as well as the givenness is crucial to understanding discourse structure and information structure although only the givenness has received much attention in the literature.

An intonation unit (IU) is defined as a stretch of speech occurring under a single intonation contour and is considered to be a unit of information packaging in the speaker's mind (Chafe, 1994; Du Bois, Schuetze-Coburn, Cumming, & Paolino, 1993; Iwasaki, 1993, 2008). It has been pointed out in the literature that there are two kinds of intonation units in Japanese, phrasal IUs and clausal IUs (Iwasaki, 1993), while in English one finds mainly clausal IUs (Chafe, 1994). We worked on the question of how these two kinds of IUs are different. Our findings are as follows:

- (1) a. One of the functions of phrasal IUs (especially with topic markers) is to introduce important information, i.e., topics.
- b. Clausal IUs in Japanese tend to not introduce important information.
- c. The importance as well as the givenness is crucial to understanding discourse structure and information structure even though only the givenness has received much attention in the literature.

We investigated nouns in a corpus called *Corpus of Spontaneous Japanese*, employing Givón's (1983) method of measuring the givenness and the importance of information and found that our hypotheses are supported.

1.2. Outline

The organization of this paper is as follows. In §2, we give an overview of the intonation unit and its basic characteristics in English and Japanese. We discuss how there are two kinds of intonation units in Japanese: phrasal IUs and clausal IUs.

In §3, we discuss literature on two kinds of intonation units in Japanese and point out that we cannot predict when an IU will be phrasal and when it will be clausal based on the literature. We propose that phrasal IUs tend to introduce new and important information, i.e. topics.

In §4, we employ Givón's (1983) method of measuring the givenness and the importance of a referent in order to investigate nouns in a spoken corpus and see whether our hypotheses (1) above is supported or not. We discuss possible explanations for why there are two kinds of IUs in Japanese. We show that many nouns in phrasal IUs have topic markers and examine the functional and phonetic similarities between phrasal IUs with topic markers in Japanese and the preposed elements in left-dislocation sentences found in many languages. Here we propose our second hypothesis: that topic markers tend to introduce important information just as phrasal IUs do.

In §5, we investigate nouns in the spoken corpus as in the previous section to see whether our second hypothesis is supported or not. We find that nouns in phrasal IUs with topic markers such as *wa* "TOP," *mo* "also," and *toiu* "called" tend to introduce topics.

In §6, we conclude our discussion and propose reinterpretations of previous findings on IUs and other related issues.

2. Backgrounds

In this section, we give an overview of the characteristics of intonation units in English and Japanese (2.1), and briefly introduce some unique characteristics of Japanese IUs (2.2).

2.1. Intonation Unit

In this section we briefly discuss what intonation units are and how to identify them. An intonation unit (IU) is defined as a stretch of speech occurring under a single intonation contour, which can be perceived from acceleration and

deceleration of the speech rate, boundary tone, pitch reset, pause, etc. (see Du Bois et al., 1993; Chafe, 1994, Ch. 5).

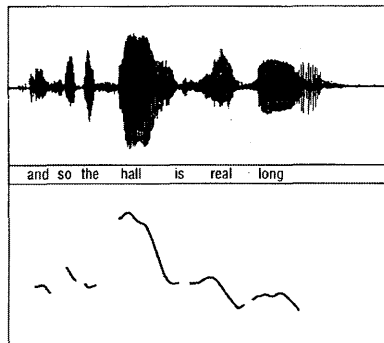
As an example, consider (2) and Figure 1, where each line corresponds to a single IU.³

- (2) a. .. and so the háll is rèal lò=ng%.
b. ... (.36) [next IU]

(Chafe, 1994: 59)

Chafe (1994) explains how to determine that (2) is a single intonation unit: (i) there are pauses before and after the IU, (ii) there is one focus element *hall*, which is recognized as the highest pitch contour, (iii) the IU has a coherent intonation contour around the focus, (iv) there is an acceleration at the first three words (*and so the*), (v) there is a deceleration at the last word (*long*).

Figure 1 An example of an IU



Chafe (1994) argues that a typical IU in English corresponds to a clause (i.e., a predicate and its argument(s)). As we see in the next section, however, Japanese has two kinds of frequent IUs: phrasal IUs and clausal IUs.

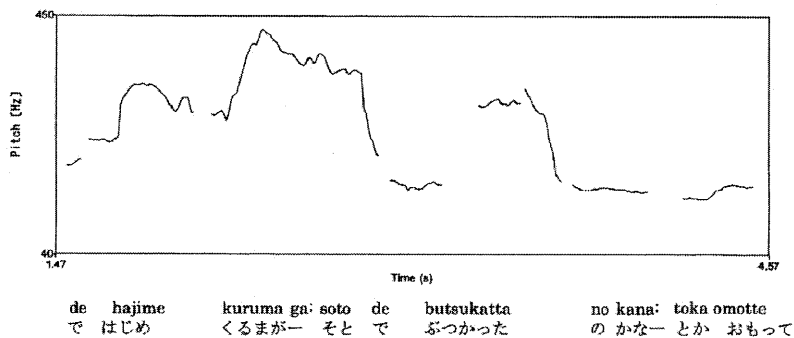
Iwasaki (2008) proposes important factors for identifying IUs in Japanese:

- (3) a. coherent contour (for the whole IU)
b. pause (between IUs)
c. pitch reset (at the beginning of an IU)
d. syllable lengthening (at the end of an IU)
e. pitch changing (at the end of an IU)
f. interjection (at the end of an IU)

We show an example from Iwasaki (2008, 108).

- (4) [The speaker talks about the earthquake s/he encountered.]
de hazime kuruma-ga: soto-de butukat-ta-no-kana:-toka omot-te
and at.first car-NOM outside-LOC crash-PAST-NOMINL-Q-HDG think-and
"At first, (I) thought a car crashed."

Figure 2 An example of an IU



As we see in Figure 2, the speaker utters the IU without a pause. Although there seem to be pauses in this IU, the break points of the intonation contour are not pauses but voiceless consonants or lexical pauses.⁴ In (4), *kuruma* "car" is the focus element and uttered with the highest pitch. After the focus element, the pitch contour goes down to the end of the IU. The last element *omot-te* "think-and" has the lowest pitch.

2.2. Characteristics of Intonation Unit in Japanese

In this section we introduce some general characteristics of Japanese and more specific aspects of Japanese intonation units.

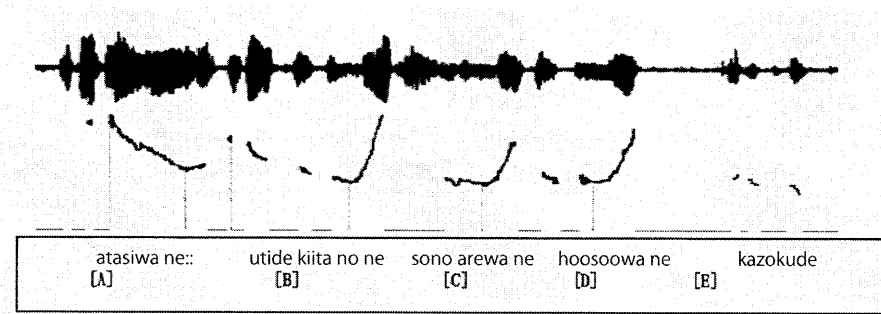
Iwasaki (1993) reports that there are two kinds of IUs in Japanese: phrasal IUs and clausal IUs. On the one hand, A phrasal IU (P-IU) expresses only a fragment of a proposition, which contains, for example, a noun and a particle, an adverb, etc. For instance, example (5) contains only one predicate in a total of four IUs and arguments of the predicate are scattered throughout the four IUs. Each line in (5) corresponds to a P-IU.

- (5) a. atasi-wa ne?
I-TOP PRT

- b. uti-de kii-ta-no ne?
home-LOC hear-PAST PRT
 - c. sono are-wa ne?
that that-TOP PRT
 - d. hoosoo-wa ne?
broadcast-TOP PRT
 - e. kazoku-de
family-with
- "I heard that broadcast at home with my family."

(Iwasaki, 1993: 40)

Figure 3 An example of a phrasal IU in Japanese



A clausal IU (C-IU), on the other hand, contains both a predicate and the arguments of the predicate. Chafe (1994) reports that C-IUs are common in English. An example of a C-IU in Japanese is shown in (6):

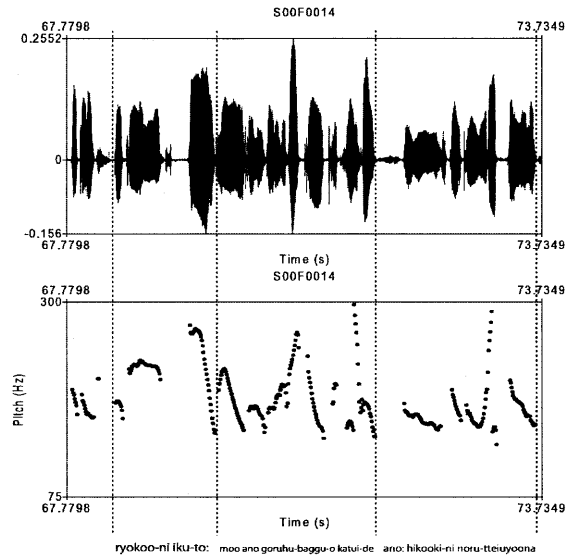
- (6) a. ryokoo-ni iku-to:
travel-to go-when
- b. moo ano goruhu-baggu-o katui-de
FL FL golf-bag-ACC carry-and
- c. ... ano hikooki-ni noru-tteiuyoona
FL airplane-TO get.on-such.as

"So, when (we) go travelling, (we) carry our golf bags and get on the airplane."

(S00F0014)

This observation leads us to the following general question: what is the difference between C-IUs and P-IUs?

Figure 4 An example of a clausal IU in Japanese



3. Previous Work

In this section we review the previous study by Iwasaki (1993) in §3.1, point out a remaining issue in §3.2, and propose an alternative hypotheses in §3.3.

3.1. Iwasaki (1993)

Iwasaki (1993) proposes that IUs have four kinds of components and argues that the Two Components Constraint is at work in Japanese conversation. The four kinds of components proposed in Iwasaki (1993) are listed below:

- (7) a. **Filler leads (LD)**, which regulate the flow of conversation: *ano* "uh" and *eeto* "let's see".
- b. **Ideational component (ID)**, which expresses a piece of proposition.
- c. **Cohesive component (CO)**, which relates one IU to another. Examples include: *wa* (topic marker) and *no* (nominalizer).⁵
- d. **Interactional component (IT)**, which expresses speech acts and concern for the other participant(s): Examples include: *ne* "isn't it?," *yo* (telling the addressee what you know), and *ka* (question marker).

He claims that these four kinds of components are expressed by different lexical items in Japanese and that it is possible to tell which lexical item in an IU expresses which kind of component. An example is shown in (8).

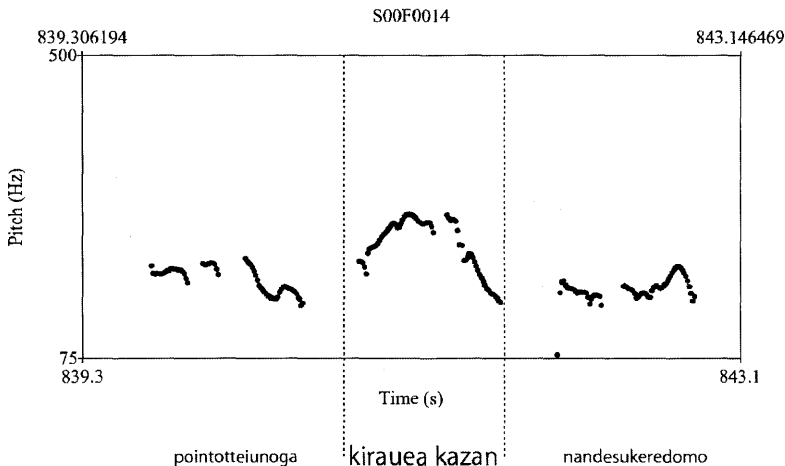
- (8) ano tabi-nante si-ta-koto nakat-ta -no ne
 FL travel-kind.of.thing do-PAST-NOMINL NEG-PAST -NOMINL PRT
 [LD] [ID] [CO] [IT]
 "Uh (I) have never travelled alone."

However, IUs like (8) are rare and more than 80% of the IUs in Iwasaki's data contain one or two components. He argues that there is a constraint on the number of components Japanese IUs can have, namely that an IU has at most two components, and calls this constraint the Two Component Constraint hypothesis.

3.2. Remaining Issue

Although Iwasaki's observation and hypothesis are quite interesting and worth noting, we cannot predict when speakers will use P-IUs and when they will use C-IUs. Thus we want to begin with an analysis that predicts when P-IUs and C-IUs tend to appear. This paper focuses on P-IUs in particular and attempts to predict under which condition an IU will tend to be a P-IU.

Figure 5 An Example of a Typical P-IU



3.3. Questions and Hypotheses

We formulate our questions as follows: Does a P-IU have a special function in

discourse?; If the answer is "yes," what function does it have?

As Nakagawa, Yokomori, and Asao (2008) and Szatrowski (2008) point out, nouns are uttered with a single coherent contour when the speaker introduces new and important information. For example, Figure 5 shows the phonetic characteristics of *kirauea-kazan* "Kilauea-volcano" uttered in a P-IU: it is preceded and followed by pauses more than 0.2 seconds long and the tone at the end of the IU sounds like a boundary tone. In such cases, according to their observations, nouns are likely to be new and to be a topic of the following discourse.

This leads us to have the following hypotheses:

- (9) a. One of the functions of P-IUs in Japanese is to introduce important information.
- b. C-IUs tend to not introduce important information.

4. Corpus Investigation I

In this section we investigate nouns in a spoken corpus to see whether our hypotheses are supported.

4.1. Corpus Investigation I

We used one 1269-second monologue from *the Corpus of Spontaneous Japanese* (the CSJ), in which the speaker talks about her trip to Hawaii. 747 IUs and 493 nouns were identified.

In order to measure the newness and the importance of nouns in the corpus, we considered Referential Distance (RD) and Persistence (Givón, 1983).

Referential Distance (RD) approximates the newness of a noun. It is the number of IUs between the current IU and the IU in which the referent was previously referred to (Givón, 1983, p. 13ff.). We arbitrarily count the RD of new information as 100, which is also the maximal value of RD.

Persistence, on the other hand, approximates the importance of a noun. The persistence of a referent, r , when found in an IU, u , is the number of IUs subsequent to u where r is mentioned (ibid.). We arbitrarily count the maximal value of Persistence as 200.

In (10), for example, we want to measure the RD and Persistence of *syoo-doobutu* "a small animal." Firstly, in (10a), the RD of *syoo-doobutu* "small animal" would be 100 because it is mentioned for the first time. Its Persistence would be 3 because it is mentioned three times after first being mentioned in (10a). Secondly, in (10c), where *syoo-doobutu* is mentioned again with a zero anaphor ("it"), its RD would be

2 because it has been mentioned two lines (IUs) earlier. In the same way, in (10e), the RD of would be 2 and its Persistence would be 1, and, in (10i), the RD of would be 4 and its Persistence would be 0.

(10)	RD	Persistence
a. ... syoo-doobutu -ga koo tyokotyoko-to ki-ta-n-desu-ne "A small animal came (to us)."	100	3
b. ...de saisyo koo "and at first uh"	--	--
c. ...ano sotira-no soto-no-hoo-kara ϕ nozoi-ta-mon-desu-kara "uh it looked at us from that direction,	2	2
d. ...watasi-wa saisyo "I thought at first"	--	--
e. ... ϕ risu-kana-to omot-ta-n-desu " it was a squirrel."	2	1
f. ...de "and"	--	--
g. ...t= sat-to koo "quickly"	--	--
h. ...are-to omot-te it-tara "when I was thinking something,"	--	--
i. ...sat-to ϕ nige-tyai-masi-te " it quickly ran away, and"	4	0
(CSJ: S00F0014)		

We see the following implications concerning RD and Persistence:

(11) Implications concerning RD

- Greater RD means newer information (maximum: 100).
- Smaller RD means older information (minimum: 0).

(12) Implications concerning Persistence

- Smaller Persistence means less important information (minimum: 0).
- Greater Persistence means more important information (maximum: 200).

We exclude the following kinds of nouns:

- (13) a. Nouns in special constructions used to introduce new and important information
 - Subject NPs in existential sentences (12)
- b. Nouns which lack predicates
 - Listed nouns (21)
 - Nouns modifying other nouns (52)
 - Paraphrased nouns (10)
- c. Nouns which correspond to predicates
 - Nouns which combine with *o-suru* "ACC-do" and express events (36)
 - Complements of copular sentences (17)

Numbers in the parentheses indicate the number of nouns found in the corpus. Values for nouns in existential sentences in (13a) were calculated independently because they have special status concerning information structure. We regard them as exceptional C-IUs. Other nouns in (13) cannot be grouped with either P-IUs or C-IUs either because they do not have predicates (13b) or because they themselves correspond to predicates (13c). P-IUs and C-IUs can be distinguished by whether the predicates of the nouns are uttered in a coherent contour or in a separate contour.

4.2. Results

We identified 80 P-IUs and 116 C-IUs in the corpus. Table 1 shows the results of our corpus investigation. As we see in Table 1, nouns in P-IUs refer to more important information and nouns in C-IUs refer to less important information. As we also see in Table 1, nouns in both P-IUs and C-IUs tend to refer to new information although it is not necessarily always the case. Because it is difficult to evaluate the newness based on RD, we exclude RD from the following discussion.

The results show that one of the functions of P-IUs in Japanese is to introduce new and important information (though note that different kinds of P-IUs exist), while C-IUs do not have this function.

Table 1 Average number of RD and Persistence of nouns
 in P-IUs, C-IUs, and Existentials

	P-IU	C-IU	Existentials
Referential Distance	62.9	66.1	100.0
Persistence	1.6	1.0	2.5

4.2.1. Examples

Example (14) shows several P-IUs. As we see, P-IUs introduce important information.

(14)	RD	Persistence
a. maunakea Mauna Kea	100	4
b. maunaroa Mauna Loa	100	4
c. toiu hutatuno called two-GEN	--	--
d. ano yama-ga FL mountain-NOM	2	3
e. sobie-teru-n-desu-keredomo soar-STATE-NOMINL-POL-though	--	--
f. sono yama-toiu-no-ga this mountain-QUOTE-called-NOMINL-NOM	2	2
g. huzi-san-kurai-no takasa-ga aru-n-desu-ne Fuji-mountain-about-GEN height-NOM exist-NOMINL-POL-PRT "(In Hawaii Island,) there are two mountains called Mauna Kea and Mauna Loa, which are as high as Mt. Fuji." (CSJ: S00F0014)	--	--

Example (15) shows several C-IUs. As we see in (15), C-IUs refer to new but trivial information.

(15)	RD	Persistence
a. ..ryokoo-ni iku-to travel-to go-when	--	--
b. moo ano: goruhu-baggu-o katui-de FL FL golf-bag-ACC carry-and	100	0
c. ...ano hikooki-ni noru-tte-iu-yoona FL airplane-LOC get.on-QUOTE-called-like "Whenever (we) travel, (we) carry our golf bags and get on the airplane." (CSJ: S00F0014)	100	0

4.2.2. Counterexamples

We have two types of counterexamples. The first type is P-IUs which do not introduce important information. As in (16), a trivial noun can be referred to in a

P-IU when the P-IU is long.

(16)		RD	Persistence
a.	tikatetu-toka sorekara ma ano: basu-rosen-toka sorekara subway-and moreover FL FL bus-lines-and moreover	--	--
b.	ma densya-toka-ga hattatu-si-te-nai-yoona tokoro-wa FL train-and-NOM development-do-and-NEG-like place-TOP	100	0
c.	moo hontooni FL really	--	--
d.	kuruma-wa moo hissu-zyookken-toiuka car-TOP FL crucial-condition-you.may.call.it	--	--
"Where there are no subways, buses, or trains, cars are crucially needed." (CSJ: S00F0014)			

The second type is C-IUs which do introduce important information. As in (17), an important noun can be referred to in a C-IU when it is embedded in a relative clause.

(17)		RD	Persistence
a.	sizen-o taisetuni-suru tokoro nature-ACC preserve-do place	100	9
b.	de-wa LOC-TOP	--	--
c.	ano: FL	--	--
d.	moo sinkokuna mondai-ni FL serious problem-to	--	--
e.	nari-tutuaru-yoo-desu become-PROG-POL	--	--
f.	desukara so	--	--
g.	yahari sizen-no yutakana tokoro-ni ikimasu-to after.all nature-NOM rich place-to go-POL-when	6	8
"Where people try to preserve the environment, foreign animals cause serious problems. So, when we go to this kind of place..." (CSJ: S00F0014)			

We could argue that these kinds of IUs are exceptional. Further study is needed on this issue.

4.3. Discussion

Why does Japanese have two kinds of IUs unlike, for example, English? We argue that one factor is that Japanese has topic markers (*wa* "TOP," *mo* "also," and *toiu* "called").⁶ These markers are traditionally called *toritate-si* "picking-up particle" in the Japanese literature. Here we refer to all of them as "topic markers." As Table 2 shows, the topic markers (with the exception of *mo* "also") appear more frequently in P-IUs than in C-IUs, while other case markers appear more frequently in C-IUs than P-IUs.

As for *mo* "also," it is in fact ambiguous: it can be interpreted either as "also" or as topic marker. According to our observations, *mo* of topic marker reading tends to appear in P-IUs, while it tends to appear with the "also" reading in C-IUs. Further study is needed on this issue.

As for *toiu* "called," it has some variants such as *teiu* and *tte*. We counted all of them as *toiu*. As specified below, *toiu* can be attached by other markers such as *wa*, *ga*, and *mo*. *Toiu* in Table 2 includes all of the variations such as *toiu-no-wa* "called-NOMINL-TOP" and *toiu-no-ga* "called-NOMINL-NOM." In such cases they are also counted as *wa* "TOP" and *ga* "NOM."

Table 2 The frequencies of markers in P-IUs and C-IUs

	<i>wa</i> (TOP)	<i>mo</i> (also)	<i>toiu</i> (called)	<i>ga</i> (NOM)	<i>o</i> (ACC)	<i>ni</i> (LOC)
P-IU	39	12	23	25	8	12
C-IU	17	19	5	36	32	27

Although the characteristics of *mo* "also" and *toiu* "called" are not clear, it has been pointed out in the literature that *wa* attaches to topic nouns and tends to appear at the beginning of sentences (Kuroda, 1979; Kuno, 1973). Thus, (18a), in which the phrase with *wa* "TOP" is at the beginning of the sentence, is natural, while (18b), in which the phrase with *wa* "TOP" is at the middle of the sentence, is not.

- (18) a. ano hon-wa John-ga kat-ta
 that book-TOP John-NOM buy-PAST
 "As for that book, John bought it."
 Or "That book, John bought it." (Kuroda 1979: 56)
- b. ??John-ga ano hon-wa kat-ta
 John-NOM that book-TOP buy-PAST (Constructed example)

We argue that the function of *wa* is similar to that of preposed elements in left-dislocation sentences found in many languages such as English, French, Italian, and Spanish (see Givón, 2001: 265ff.). Left-dislocation sentences are sentences where some elements other than subjects are preposed as in (19).

(19) A: What happened to Tom?

B: His car, it broke down, and he's depressed.

(Keenan & Schieffelin, 1976: 242)

This kind of sentence is similar to P-IUs in the following way:

(20) a. Preposed elements are at the beginning of the sentence. (by definition)

b. Preposed elements correspond to a coherent contour by themselves.

(Keenan & Schieffelin, 1976)

c. Left-dislocation sentences (re)introduce the idea into discourse (see (21) below). (Givón, 1983)

d. Preposed elements are important topics in the following proposition.

(Givón, 1983)

(21) A: What happened to Tom?

B: His car, it broke down, and he's depressed.

B': ??Concerning Tom, he left.

B'': ?Tom, he left.

(Keenan & Schieffelin, 1976: 242)

Thus we argue that topic markers have functions similar to those of P-IUs. We propose the following hypothesis and will show in the next section that our hypothesis is supported by further corpus investigation.

(22) NPs with the topic markers *wa*, *mo*, and *toi* tend to have greater Persistence than NPs with other markers.

5. Corpus Investigation II

In this section we investigate nouns in the same corpus to see whether our second hypothesis are supported or not.

5.1. Corpus Investigation II

We used the same data as in corpus investigation I. We compared Persistence for

NPs with different types of markers:

- (23) a. *ga* (nominative marker)
 b. *mo* ("also")
 c. *ni* (locative marker)
 d. *o* (accusative marker)
 e. *toiu* ("called")
 f. *toiu-no-wa* ("called-NOMINL-TOP")
 g. *wa* (topic marker)

Generally, topic markers can attach to case markers so that (for example) *ni-wa* "LOC-TOP" is possible. In such a case we counted the noun as a noun with a topic marker.

Moreover, as was mentioned in the previous section, *toiu* "called" can be attached to other particles. We counted each possible combination as a different kind of marker. Thus, for example, *wa* "TOP" and *toiu-no-wa* "called-NOMINL-TOP" are treated as different kinds of markers. However, because only *toiu-no-wa* (23f) appeared frequently in our data (25 examples), we excluded other possibilities from the results.⁷

5.2. Results

The results of our second corpus investigation are shown in Figure 6 and 7 and in Table 3.

Figure 6 Persistence of NPs with different markers

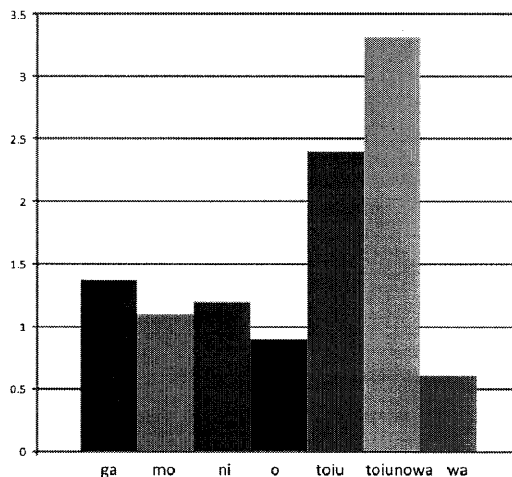


Figure 6 shows the average Persistence of NPs with different markers. It suggests that NPs with *wa* and *toiu* tend to appear in P-IUs and have high Persistence. As Table 3 shows, Persistence of topic markers is significantly higher (*Mann-Whitney* $z = 0.38$, $p < 0.05$).

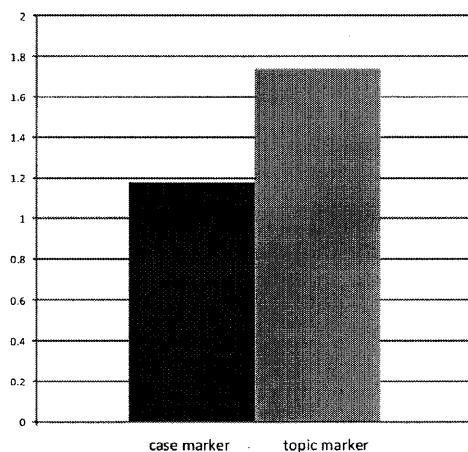
Table 3 Persistence of NPs with different markers

	<i>ga</i>	<i>mo</i>	<i>ni</i>	<i>o</i>	<i>toiu-no-wa</i>	<i>toiu</i>	<i>wa</i>
	(NOM)	(also)	(LOC)	(ACC)	(called)	(called)	(TOP)
Persistence	1.4	1.1	1.2	1.0	2.4	3.32	0.6

As we mentioned in 4.3, *mo* "also" is ambiguous between one of two readings: it can be interpreted either as "also" or as a topic marker. Our hypothesis predicts that *mo* "also" has a high Persistence only in its topic marker reading. However, we do not know how to distinguish these two readings. Further study is needed on this issue.

Figure 7 shows the average Persistence of NPs with case markers and with topic markers. It indicates that nouns with topic markers in general have larger Persistence than those with case markers.

Figure 7 Persistence of NPs with case markers and topic markers



5.2.1. Examples

Example (24) shows a typical instance of a P-IU introducing important information. (24) is a typical example of P-IU introducing important information.

(24)		Persistence
a.	ano kyoo ohanasi-si-yoo-to omot-teiru hawai-too -tojunowa FL today talk-do-will-QUOTE think-PROG Hawaii-island-called-NOMINL-TOP	3
b.	ma itiban saikin iki-masi-ta-node FL most recent go-POL-PAST-because	--
c.	ano: insyoo-mo totemo tuyoku nokot-teori-masu FL impression-also very strongly remain-PROG-POL "Hawaii, which (I) will talk about today, (I) went there recently and it made me a very strong impression on me."	--

As this example and the results of the second corpus investigation show, P-IUs and topic markers share a similar function: they both introduce new and important information.

6. Conclusion and Further Issues

In this section we conclude our discussion in 6.1, point out theoretical implications in 6.2, and enumerate some remaining issues in 6.3.

6.1. Conclusion

In summary, we found that: (i) One of the functions of P-IUs (especially with topic markers) in Japanese is to introduce important information; (ii) C-IUs tend to refer to trivial information; and (iii) P-IUs in Japanese have the same function and some of the same phonetic characteristics as left-dislocation sentences in English and other languages.

6.2. Theoretical Implications for the Previous Studies

6.2.1. Implications for the Question "What is an IU?"

This paper studies one aspect of IUs as a unit of information packaging (Chafe, 1994).

Many researchers have discussed the functions of IUs: Ono and Thompson (1995) argue that an IU corresponds to a turn-constructive unit; Chafe (1994) claims that it corresponds to a unit of information packaging; Park (2002) points out an interactional aspect of IUs. This paper focuses on IUs as units of information packaging. According to our findings, nouns in P-IUs tend to be important information and those in C-IUs tend not to. However, we do not know what kind of information C-IUs usually express.

6.2.2. Chafe's One New Idea Constraint

This study supports Chafe's (1994) One New Idea Constraint hypothesis, but it also suggests that his hypothesis should be revised to 'One New and Important Idea Constraint'.

Chafe argues that each IU can introduce only one new idea (thus the term One New Idea Constraint). As Chafe (1994) and Du Bois et al. (1993) have pointed out, however, there are many exceptions. Still, Japanese speakers do seem to obey the constraint and introduce new and important ideas with P-IUs. We need to add an "important-trivial" distinction to revise Chafe's hypothesis, and so we propose the One New and Important Idea Constraint hypothesis.

6.2.3. Important-Trivial Distinction

Although much interesting research has been done in terms of givenness of nouns (Ariel, 1990; Gundel, Hedberg, & Zacharski, 1993; Prince, 1981; Du Bois, Kumpf, & Ashby, 2003, *inter alia*), not much attention has been paid to the importance of nouns. We argue that the importance of a noun affects linguistic forms such as intonation units and the usage of markers.

6.3. Remaining Issues

Many issues remain and we enumerate some of them here.

Firstly, more research is needed on other forms (constructions) which introduce new and important ideas in Japanese and in other languages. Secondly, we still do not know why other kinds of P-IUs are not used to introduce new and important information. Finally, we do not know what kinds of constructions are used with presupposed ideas that have already been introduced in the discourse.

Notes

¹ We are grateful for the insightful comments and questions of the following people: Yukinori Takubo, Yuji Togo, Masa-aki Yamanashi and their students in Kyoto University and Jesse Lovegren and Adam Sposato in SUNY Buffalo.

² The term topic in this paper refers to the discourse topic (Brown & Yule, 1983), rather than the sentence topic.

³ The meanings of the notations in (2) is as follows:

..	medium pause
´	primary accent

˘	secondary accent	
=	lengthening	
%	glottal stop	
.	terminative intonation	
...	long pause	
(.36)	pause length	(Du Bois et al., 1993)

⁴ Japanese has lexical pauses in words like *ippai* “a lot of” and *makka* “red,” where lexical pauses are indicated by double consonants. In (4), *omot-te* “think-and” has a lexical pause and the intonation contour is broken by the pause.

⁵ The nominalizer *no* is a particle that indicates a relationship of some sort between the current sentence and the preceding one. For example, the presence of *no* in sentence (ii) indicates that the sentence is describing the reason for being absent from school. In (i), on the other hand, the relationship between the first and second sentences is not clear.

(i)	watasi-wa	gakkoo-o	yasun-da.	kaze-o	hii-ta.
	I-TOP	school-ACC	absent-PAST	cold-ACC	get-PAST
(ii)	watasi-wa	gakkoo-o	yasun-da.	kaze-o	hii-ta-no-da.
	I-TOP	school-ACC	absent-PAST	cold-ACC	get-PAST-NOMINL-ASS

⁶ The topic markers have been glossed according to their most typical usage.

⁷ Other examples are *toiu-no-ga* “called-NOMINL-NOM” (3 examples) and *toiu-no-o* “called-NOMINL- also” (1 example).

List of Abbreviations

Abbreviations used in this paper are listed below:

ACC	: accusative	PRT	: pragmatic particle
ASS	: assertion	PAST	: past
FL	: filler	POL	: polite
GEN	: genitive	PROG	: progressive
HDC	: hedge	Q	: question
LOC	: locative	QUOTE	: quotation
NOM	: nominative	STATE	: state
NOMINL	: nominalizer	TOP	: topic

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